Winter 2011

CEG 739: Medical Image Analysis

Arthur A. Goshtasby
Wright State University - Main Campus, arthur.goshtasby@wright.edu

CEG-739 - Medical Image Analysis

Term: Winter 2011 **Lecture Hours:** M, W 2:45 - 4:00 PM **Room:** 302 RC
Office: 495 JC **Office Hours:** M-R: 12:30-1:30 PM **E-mail:** agoshtas at wright.edu

---

Call Number
62238

Credits:
4

Prerequisites:
Graduate standing

Textbook:
Medical Image Analysis
by Atam Dhawan
IEEE Press, 2003

Purpose of Course:
This course discusses applications of image analysis in medical imaging. Methods for analysis of both 2-D and 3-D (volumetric) images are covered.

Contents:
1. Introduction
2. Medical Imaging Modalities
3. 2-D and 3-D Image Segmentation
4. 2-D and 3-D Features
5. 2-D and 3-D Image Registration
6. Classification and Recognition

Learning Goals:
Basic algorithms for the analysis of medical image are discussed and some of the algorithms are implemented as class projects. Additional materials (journal/conference papers) relating to the topics covered in class are handed out for further reading.

Projects:
There will be two programming assignments, three quizzes, and report and a class presentation. Programming assignments will be in C/C++ or MATLAB. Each student is also required to read a paper on a topic covered in class, summarize it into a short report, and also present it in class.

Grading Policy:
The programming assignments will worth 35%, the presentation and the report will worth 20% , and the quizzes will worth 45% of the total grade. A: [90,100], B: [80,89], C: [70,79], D: [60,69], E: [0,59]

Calendar:

Project 1	Handed out: 1/19	Due: 2/9
Project 2	Handed out: 2/14	Due:3/2
Quiz 1	On 1/24	
Quiz 2	On 2/9	
Quiz.3	On 2/28	